

## **REMARKS**

### **Amendments**

Claims 10 and 11 have been amended to eliminate ‘means’ terms and to clarify the subject matter Applicants regard as the invention. The amendments to claim 10 clarifies that the ceramic material of the tubular element has predetermined number of pores of predetermined sizes for minimizing sidestream smoke and restricting inward flow of air to reduce free-burn rate. Claim 11 had been amended to clarify that the tubular element consists essentially of porous ceramic material for minimizing sidestream smoke emission and reducing free-burn rate.

These claim amendments are supported in the specification at page 5, last paragraph, through page 6, first paragraph; at the paragraph bridging pages 11 and 12, and the first full paragraph on page 12; at the paragraph bridging pages 13 and 14; and the claims themselves.

Applicants respectfully submit that these claim amendments add no new matter to the application and earnestly solicit their entry.

### **The Invention**

The invention is directed to a device for minimizing cigarette sidestream smoke and reducing the free-burn rate of a burning cigarette. The device comprises a non-combustible tubular element encasing an effective length of a tobacco charge of a cigarette in the tubular element. In one embodiment, the tubular element comprises ceramic material and has a predetermined number of pores and predetermined pore sizes for both minimizing sidestream smoke emission from a burning tobacco charge and restricting inward air flow to reduce free-burn rate of the burning tobacco charge to increase the number of puffs therefrom. In another embodiment, the tubular element consists essentially of a porous ceramic material for both minimizing sidestream smoke emission from a burning tobacco charge and reducing free-burn rate of the burning tobacco charge to increase the number of puffs therefrom.

### **The Office Action**

Both claims stand rejected under 35 U.S.C. § 102(b) as anticipated by, or in the alternative under 35 U.S.C. § 103(a) as obvious over, Valdez, United States Patent Number 4,685,477. In pertinent part, the office action asserts that Valdez discloses a “plurality of air intake spaces, perforations 26, is useful for enabling the ember end of the cigar or cigarette to burn. As the smoker puffs or draws on the primary smoke filter end of the cigar or cigarette, air may be drawn into the second and third chambers through the air intake spaces [perforations 26] to enable the ember to burn. In this manner, sufficient air is provided for burning of the tobacco to generate smoke.”

The office action further asserts that Valdez discloses that it is possible to control the rate at which the ember end of the cigar or cigarette burns by varying the size and/or number of the air intake spaces [perforations 26]. In this manner, the cigar or cigarette may be made to burn slower and therefore last longer than if smoked without the Valdez device. The office action also asserts that Valdez discloses that perforations 26 reduce the free-burning rate of the burning tobacco in order to increase the number of puffs from the burning tobacco charge as claimed by applicant.

### **The Cited Document**

Valdez, United States Patent Number 4,685,477, is directed to a device that assists a smoker in holding a cigarette or cigar during smoking. The device, which comprises a tubular member having three chambers, serves as a tubular smoke absorbent filter. A filter material is placed inside the tubular member to define a first chamber; a concentric second tubular member with a perforated wall also may be provided. The second and third chambers are coaxially aligned inside the first chamber and have a wall between them. The cigarette is placed into the second and third chambers. The third chamber is at the ‘lighted’ end of the cigarette, and has a

perforated plate 21 over that (proximal) end of the tubular member. The third chamber comprises an ash chamber to catch ashes that fall from the ember end of the cigarette or cigar.

The tubular member comprises a plurality of air outlet means 26 to serve as *exhaust* pores “through which air filtered of random smoke escapes or is released” (column 5, lines 7-15). A concentric tube can be placed in the tubular member to form an inner sleeve for retaining the filter material. According to Valdez, air enters through air intake spaces 22 in proximal end plate 21.

**The Invention in view of the cited document**

Claims 10 and 11 stand rejected under 35 U.S.C. § 102(b) as being anticipated by or, in the alternative, under 35 U.S.C. § 103 as obvious over Valdez. Applicants respectfully traverse these rejections. Not only does Valdez not disclose the claimed device, but also Valdez does not suggest the claimed invention.

The Office Action asserts that Valdez discloses a cigar or cigarette holder that has three chambers: the first chamber defined by the space between a perforated tubular member, concentrically situated around a perforated inner tubular member, and the inner tubular member, wherein the first chamber is substantially filled with a filter material; the second and third chambers are within the inner tubular member substantially coaxially aligned and separated by a wall having an aperture to transfer ash from the second chamber and the third chamber. The Office Action further asserts that the claimed non-combustible tubular member is deemed as element 25, and that the perforations 26 provide for the claimed porosity recited in the pending claims.

In accordance with that assertion, the plurality of air intake spaces, perforations 26, is said to enable the ember end of the cigar or cigarette to burn. As the smoker puffs or draws on the primary smoke filter end of the cigar or cigarette, air is said be drawn into the second and

third chambers through the air intake spaces (perforations 26) to enable the ember to burn; in this manner, sufficient air is provided for burning of the tobacco to generate smoke. The Office Action further asserts that it is possible to vary the size and/or number of the air intake spaces (perforations 26) to control the rate at which the ember end of the cigar or cigarette burns. In this manner, the cigar or cigarette may be made to burn slower and therefore, last longer than if smoked without the Valdez device. Perforations 26 of Valdez are said to reduce the free-burning rate of the burning tobacco in order to increase the number of puffs from the burning tobacco charge as instantly claimed by applicant.

Applicants respectfully submit that none of these assertions is well-founded. The office action has not properly identified the functions of the various elements of Valdez and therefore, Applicants respectfully submit, has come to incorrect conclusions regarding anticipation and obviousness.

Applicants respectfully submit that elements 26 of Valdez are "air outlet means" which serve as the exhaust pores through which air filtered of random smoke (e.g. sidestream smoke) escapes or is released (see Column 5, lines 7-15). In contradistinction, Valdez teaches that element 22 is the plurality of air intake spaces (Column 3, lines 55-57) useful for enabling the ember end of the cigar or cigarette to burn. Air may be drawn into the second and third chambers through these air intake spaces, element 22, to enable the ember to burn (see Column 4, lines 8-21). Valdez teaches that it is the air intake spaces, element 22, and not the air outlet means of element 26, that can be varied in size and/or number to control the rate at which the ember end of the cigar or cigarette burns (column 4, lines 15-21). Moreover, it is the air intake spaces, element 22, not the perforations 26, which reduce the free-burning rate of the burning tobacco in order to increase the number of puffs from the burning tobacco charge.

The office action also asserts that it is the size and number of perforations, element 26, that minimize the sidestream smoke. Applicant respectfully submits that this assertion is not well-founded. It is the filter material in the first chamber 17 of Valdez that minimizes the sidestream smoke (see Column 4, lines 38-68). The perforations, element 26, of Valdez simply act as exhaust pores (see Column 5, lines 7-15). Valdez does not contemplate Applicant's tubular element comprising ceramic material having a predetermined number of pores and predetermined pore sizes to both minimize sidestream smoke and reduce the free-burn rate or Applicant's tubular element consisting essentially of porous ceramic material (Claim 11) for both minimizing sidestream smoke and reducing the free-burn rate.

Accordingly, Valdez teaches that element 22 acts as air intake spaces to control the rate at which the ember end of the cigar or cigarette burns and it is the filter material in the first chamber 17 that minimize the sidestream smoke. In contrast, the claimed invention utilizes the predetermined number of pores and the size of pores (Claim 10) for both minimizing sidestream smoke and reducing the free-burn rate or a tubular element consisting essentially of porous ceramic material (Claim 11) for both minimizing sidestream smoke and reducing the free-burn rate. In contrast, Valdez requires two separate distinct elements to achieve each of these results.

Thus, for at least the reasons set forth above, applicants respectfully traverse this rejection. Perforations 26 do not serve to throttle the amount of air drawn into the core of the tubes. Rather, Applicants respectfully submit that Valdez discloses that elements 26 are "air outlet means" which serve as the *exhaust* pores through which air filtered of random smoke (e.g. sidestream smoke) escapes or is released (*see* Column 5, lines 7-15).

It is actually air intake spaces 22 in plate 21 forming the end of the third chamber that Valdez teaches is the air intake element (Column 3, lines 55-57) useful for enabling the ember

end of the cigar or cigarette to burn. Air may be drawn into the second and third chambers through the air intake spaces, element 22, to enable the ember to burn (see Column 4, lines 8-21). Valdez teaches that it is the design of end plate 22, not the air outlet means of element 26, which can be manipulated by changing the size and/or number of perforations to control the rate at which the ember end of the cigar or cigarette burns. Moreover, it is the same air intake spaces in end plate 22, not the perforations 26, which reduce the free-burning rate of the burning tobacco in order to increase the number of puffs from the burning tobacco charge.

Further, contrary to the assertions in the Office Action, Valdez discloses that the filter material in the first chamber formed by the concentric tubes minimizes the sidestream smoke (see Column 4, lines 38-68); the perforations 26 simply act as exhaust pores (see Column 5, lines 7-15).

### **CONCLUSION**

Applicants respectfully submit that the office action is based on assertions that are not well-founded and are indeed contrary to the teachings of the cited art, Valdez. For at least the reasons set forth herein, Applicants respectfully traverse the rejections of claims 10 and 11 over Valdez.

Respectfully submitted,

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